34

## **Claims**

## 1. Novel tetrahydropyridine derivatives according to formula (I)

## 5 wherein

10

15

X and Y represent independently hydrogen, fluorine or a methyl group; X and Y do not represent both hydrogen at the same time or X and Y may together form a cyclopropyl ring;

W represents a phenyl or heteroaryl ring, the heteroaryl ring being a six-membered and non-fused ring, the phenyl ring and the heteroaryl ring are substituted with V in position 3 or 4;

V represents -(CH<sub>2</sub>)<sub>r</sub>-; -A-(CH<sub>2</sub>)<sub>s</sub>-; -CH<sub>2</sub>-A-(CH<sub>2</sub>)<sub>t</sub>-; -(CH<sub>2</sub>)<sub>s</sub>-A-; -(CH<sub>2</sub>)<sub>2</sub>-A-(CH<sub>2</sub>)<sub>u</sub>-; -A-(CH<sub>2</sub>)<sub>v</sub>-B-; -CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-A-CH<sub>2</sub>-; -A-CH<sub>2</sub>-CH<sub>2</sub>-B-CH<sub>2</sub>-; -CH<sub>2</sub>-A-CH<sub>2</sub>-CH<sub>2</sub>-B-; -CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-B-; -CH<sub>2</sub>-A-CH<sub>2</sub>-CH<sub>2</sub>-B-; -CH<sub>2</sub>-A-CH<sub>2</sub>-CH<sub>2</sub>-B-; -CH<sub>2</sub>-CH<sub>2</sub>-A-CH<sub>2</sub>-CH<sub>2</sub>-B-; -O-CH<sub>2</sub>-CH(OCH<sub>3</sub>)-CH<sub>2</sub>-O; -O-CH<sub>2</sub>-CH(CH<sub>3</sub>)-CH<sub>2</sub>-O-; -O-CH<sub>2</sub>-CH(CF<sub>3</sub>)-CH<sub>2</sub>-O-; -O-C(CH<sub>3</sub>)<sub>2</sub>-CH<sub>2</sub>-O-; -O-C(CH<sub>3</sub>)<sub>2</sub>-CH<sub>2</sub>-O-; -O-CH<sub>2</sub>-C(CH<sub>3</sub>)<sub>2</sub>-O-; -O-CH<sub>2</sub>-C(CH<sub>2</sub>)-O- or -O-C(CH<sub>2</sub>-CH<sub>2</sub>-O-;

A and B independently represent -O-; -S-; -SO- or -SO<sub>2</sub>-; U represents aryl or heteroaryl;

)

T represents  $-CONR^1$ -;  $-(CH_2)_pOCO$ -;  $-(CH_2)_pN(R^1)CO$ -;  $-(CH_2)_pN(R^1)SO_2$ -; -COO-;  $-(CH_2)_nOCONR^1$ - or  $-(CH_2)_nN(R^2)CONR^1$ -; R<sup>1</sup> and R<sup>2</sup> independently represent hydrogen; lower alkyl; lower alkenyl; lower alkinyl; cycloalkyl; aryl-lower alkyl, heteroaryl-lower alkyl or cycloalkyl - lower alkyl; 5 Q represents lower alkylene or lower alkenylene; M represents hydrogen; cycloalkyl; aryl; heterocyclyl or heteroaryl; p is the integer 1, 2, 3 or 4; r is the integer 3, 4, 5, or 6; s is the integer 2, 3, 4 or 5; 10 t is the integer 1, 2, 3 or 4; u is the integer 1, 2 or 3; v is the integer 2, 3 or 4; and optically pure enantiomers, mixtures of enantiomers such as racemates, diastereomers, mixtures of diastereomers, diastereomeric racemates, mixtures of diastereomeric racemates, and the meso-form; as well as pharmaceutically acceptable 15 salts, solvent complexes and morphological forms.

- 2. Tetrahydropyridine derivatives according to claim 1 wherein X, Y, V, W and U are as defined in general formula (I); T represents -CONR<sup>1</sup>-; Q represents lower alkylene and M represents hydrogen, aryl or heteroaryl.
- 3. Tetrahydropyridine derivatives according to any of claims 1 to 2 wherein X, Y, W, T, Q and M are as defined in general formula (I), V represents -CH<sub>2</sub>CH<sub>2</sub>O-; -CH<sub>2</sub>CH<sub>2</sub>O-; -OCH<sub>2</sub>CH<sub>2</sub>O- or -CH<sub>2</sub>CH<sub>2</sub>OCH<sub>2</sub>O- and U is as defined in general formula (I).
- Tetrahydropyridine derivatives according to any of claims 1 to 3 wherein X, Y, V, U, T,
  Q and M are as defined in general formula (I) and W represents a phenyl substituted in 4 position with V.
  - 5. Tetrahydropyridine derivatives according to any of claims 1 to 4 wherein W, V, U, T, Q and M are as defined in general formula (I) and X and Y together may form a cyclopropyl group.
- 30 6. The compounds according to any of claims 1 to 5 selected from the group consisting of:

36

- 8-{4-[3-(2-Chloro-3,6-difluorophenoxy)propyl]phenyl}-5-aza-spiro[2.5]oct-7-ene-7-carboxylic acid cyclopropyl-(2,3-dichlorobenzyl)amide;
- 4-{4-[3-(2-Chloro-3,6-difluorophenoxy)propyl]phenyl}-5,5-dimethyl-1,2,5,6-tetrahydropyridine-3-carboxylic acid cyclopropyl-(2,3-dichlorobenzyl)amide;
- 4-{4-[3-(2-Chloro-3,6-difluorophenoxy)propyl]phenyl}-5,5-dimethyl-1,2,5,6tetrahydro-pyridine-3-carboxylic acid cyclopropyl-(2-methoxy-3-methylpyridin-4-ylmethyl)amide;
  - 8-{4-[3-(2-Chloro-3,6-difluorophenoxy)propyl]phenyl}-5-aza-spiro[2.5]oct-7-ene-7-carboxylic acid cyclopropyl-(2-methoxy-3-methylpyridin-4-yl-methyl)-amide;
- 8-{4-[3-(2-chloro-3,6-difluorophenoxy)propyl]phenyl}-5-azaspiro[2.5]oct-7-ene-7-carboxylic acid cyclopropyl-[2-(2-hydroxypropoxy)-3-methylpyridin-4-ylmethyl]amide;

15

- 4-{4-[3-(2-chloro-3,6-difluorophenoxy)propyl]phenyl}-5,5-dimethyl-1,2,5,6-tetrahydro-pyridine-3-carboxylic acid cyclopropyl-[2-(2-hydroxypropoxy)-3-methylpyridin-4-ylmethyl]amide;
- 4-{4-[3-(2-chloro-3,6-difluorophenoxy)propyl]phenyl}-5,5-difluoro-1,2,5,6-tetrahydropyridine-3-carboxylic acid cyclopropyl-(2,3-dichlorobenzyl)amide.
- A pharmaceutical composition containing at least one compound according to any of claims 1 to 6 and pharmaceutically acceptable inert carrier material or adjuvants.
- 8. A compound according to any of claims 1 to 6, or composition according to claim 7, 20 for the manufacture of a medicament for the treatment or prophylaxis of diseases which are related to hypertension, congestive heart failure, pulmonary hypertension, renal insufficiency, renal ischemia, renal failure, renal fibrosis, cardiac insufficiency, cardiac cardiomyopathy, hypertrophy, cardiac fibrosis. myocardial ischemia, glomerulonephritis, renal colic, complications resulting from diabetes such as 25 nephropathy, vasculopathy and neuropathy, glaucoma, elevated intra-ocular pressure, atherosclerosis, restenosis post angioplasty, complications following vascular or cardiac surgery, erectile dysfunction, hyperaldosteronism, lung fibrosis, scleroderma,

37

anxiety, cognitive disorders, complications of treatments with immunosuppressive agents, and other diseases known to be related to the renin-angiotensin system.

- 9. A method for the treatment or prophylaxis of diseases which are related to hypertension, congestive heart failure, pulmonary hypertension, renal insufficiency, renal ischemia, renal failure, renal fibrosis, cardiac insufficiency, cardiac hypertrophy, cardiac fibrosis, myocardial ischemia, cardiomyopathy, glomerulonephritis, renal colic, complications resulting from diabetes such as nephropathy, vasculopathy and neuropathy, glaucoma, elevated intra-ocular pressure, atherosclerosis, restenosis post angioplasty, complications following vascular or cardiac surgery, erectile dysfunction, hyperaldosteronism, lung fibrosis, scleroderma, anxiety, cognitive disorders, complications of treatments with immunosuppressive agents, and other diseases known to be related to the renin-angiotensin system, comprising the administration to a patient of a pharmaceutically active amount of a five-membered heteroaryl derivative according to any of claims 1 to 7.
- 15 10. The invention as hereinbefore described.

5

10